To modify a named range, use the Manage Names dialog (Figure 226). This dialog is accessed by selecting **Sheet > Named Ranges and Expressions > Manage** on the Menu bar or pressing *Ctrl+F3*.

**Named expressions**

You also can give a long or complex formula a name. To name a formula, open the Define Name dialog (Figure 224) and enter the formula expression in the *Range or formula expression* box. Name the expression and click **Add**.

As an example, suppose you need to compute in cells C1 to C10 the circumference of a set of circles and you are given their radius in B1 to B10. Define a named expression CIRCUMFERENCE, with expression `=2*PI()*B1` and click **Add** to close the dialog. In cell C1, type `=CIRCUMFERENCE` and press *Enter*. The formula is applied to cell C1. Copy cell C1 and paste in the remaining cells from C2 to C10 and you have the circumferences of all the circles. All cells in the range C1:C10 have the expression `=CIRCUMFERENCE`.

Note that the named expression uses the same rules for cell addressing, that is, absolute and relative references.

## Order of calculation

Order of calculation refers to the sequence in which numerical operations are performed and the Wikipedia article at https://en.wikipedia.org/wiki/Order_of_operations provides useful general background information. Division and multiplication are performed before addition or subtraction. There is a common tendency to expect calculations to be made from left to right as the equation would be read in English. Calc evaluates the entire formula, then based upon programming precedence, breaks the formula down executing multiplication and division operations before other operations. Therefore, when creating formulas you should test your formula to make sure that the expected and correct result is being obtained. Following is an example of the order of calculation in operation.

*Table 10: Order of calculation*

| *Left To Right Calculation* | *Ordered Calculation* |
| --- | --- |
| 1+3*2+3 = 11<br>1+3 = 4, then 4x2 = 8, then 8+3 = 11 | =1+3*2+3 result 10<br>3*2 = 6, then 1+6+3 = 10 |
| Another possible intention could be:<br>1+3*2+3 = 20<br>1+3 = 4, then 2+3 = 5, then 4x5=20 | The program resolves the multiplication of 3 x 2 before dealing with the numbers being added. |

If you intend for the result to be either of the two possible solutions on the left, order the formula as:

((1+3) * 2)+3 = 11                    (1+3) * (2+3) = 20

✅ **Note**

Use parentheses to group operations in the order you intend; for example, `=B4+G12*C4/M12` might become `=((B4+G12)*C4)/M12`.

## Calculations linking sheets

Another powerful feature of Calc is the ability to link data through several sheets. The naming of sheets can be helpful to identify where specific data may be found. A name such as Payroll or Boise Sales is much more meaningful than Sheet1. The function named SHEET() returns the sheet number (position) in the collection of sheets. There may be several sheets in each